

superior lowbush blueberry fields establishing



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Many light-textured soils in Eastern Canada are suitable for lowbush blueberry production. Some areas have good natural stands of blueberry plants, which can be readily brought into successful production. Many suitable areas that have only sparse blueberry cover can be efficiently developed by growing plants propagated from superior lowbush blueberries.

SUPERIOR CLONES

Plants produced vegetatively from a single ancestor are called a clone. Superior clones of the lowbush blueberry have been selected either from the wild plants or from those developed by controlled breeding. They are considered superior because in test plantings they have greatly outyielded the average plants of commercial fields. The berries are large and abundant and ripen uniformly. Most of these clones ripen early and have an attractive appearance after harvest. Care has been taken to select only healthy plants that bear the fruit well off the ground.

PROPAGATION

Plants for establishing a blueberry field may be produced from cuttings of select clones, or from seeds obtained by pollinating flowers of an outstanding clone with pollen from an equally good clone.

Take cuttings 3 to 4 inches (7 to 10 cm) long and remove the leaves from the bottom two-thirds. Place them in a flat full of rooting medium firmed into the corners. A mixture of equal parts of sand and peat is good and less toxic to handle than many commercial products. Take cuttings when the black tip appears on the end of shoot growth but while it still has some flexibility. If cuttings are taken too early, they bend over when placed in flats and few of them grow. When taken too late, the bark interferes with rooting. The use of mist during rooting is essential and bottom heat is beneficial. Misting may be automatically timed, or a moisture-regulating device may be placed just above the cuttings. The latter is superior but is



The plant on the left grew from seed and the one on the right was propagated as a cutting.

more expensive to buy. Cuttings should be selected from clones that have a good growth habit, high yield, and good-quality fruit. Following rooting in a mist bed, grow the rooted cuttings in peat pots during long days to promote vegetative growth. When the roots of the cuttings have developed enough to fill the peat pot, harden off the cuttings in cool temperatures. Over winter, store plants outside under a layer of sawdust 3 to 4 inches (7 to 10 cm) deep. Plant the cuttings in the spring before new growth begins.

Seeds have special requirements for germination. Remove them from ripe berries and spread immediately on a well-drained acid soil containing at least one-third peat. Cover the seeds with 1/8 inch (0.3 cm) of finely sieved sphagnum moss. Keep the moss moist until the seeds germinate by placing the flats in mist or by watering with a fine spray. Seeds will usually germinate in 3 to 4 weeks. When the seedlings are about 3/4 inch (2 cm) high, transplant them to 3-inch (7.6-cm) peat pots containing the prepared soil. Take one part garden soil, two parts peat, and one part sand to make 12 bu (4.4 hl) and mix in 150 g of iron sulfate, 150 g of magnesium sulfate (epsom salts), and 1,500 g of superphosphate.

When the roots of the seedlings have developed enough to fill the peat pot, treat the seedlings the same as cuttings.

CHOOSING A SITE

Choose a site with a light-textured soil containing few or no large stones. Abandoned farmland is preferable because the woody weeds have been removed by cultivation and such areas are usually quite free from stones. Do not choose a place where poor drainage allows cold air from surrounding hills to settle. Do not plant

on cutover forest land that has not been plowed. These places make planting difficult, and the shrubs and trees that are present help to encourage and protect weeds.

An acid soil of pH 4.2 to 5.2 is essential for good growth. In most years lowbush blueberries mature without supplementary watering, but if a nearby pond or stream can be used for irrigation, the plants will give a higher yield in a dry year than they would otherwise. A site near water that can be used for irrigation is therefore an advantage.

PREPARING THE SOIL

Prepare the soil a year before planting by plowing it to a depth of 6 to 8 inches (15 to 20 cm) and cultivating several times during the summer to kill all perennial weeds. If any persistent weeds such as couch grass are present, spray them at the proper time with a suitable herbicide. Before using a herbicide consult your nearest agricultural office. Do not add any fertilizer while the land is being prepared or during the first few years after planting.

PLANTING

Set out dormant plants as early in the spring as is possible. To help prevent heaving by frost and to encourage increased lateral growth, see that about two-thirds of the shoot growth is below the surface of the soil. Plant the field in rows about 1 yard (1 m) apart. Allow up to 2 feet (0.6 m) between plants in a row. A shorter space between plants in the row costs more at first but is more economical in the long run, because it favors earlier establishment of the stand and reduces the cost of weed control.

Because lowbush blueberries are self-sterile, adequate pollination requires two or preferably three different clones in a plantation. Do not plant more than two rows of the same clone side by side. Sawdust mulch helps to establish the plants. For further information on cultivation practices see Agriculture Canada Publication 1477, *Lowbush Blueberry Production*.

TEST PLOTS

Before you invest in blueberry production, visit one or more areas where plantings have been established and evaluate the program for yourself. The most vigorous and extensive planting is on the Sheffield Farm of the Agriculture Canada Research Station at Kentville, N.S. Other plantings of interest in Nova Scotia are at West Brook, Nappan, and Westchester in Cumberland County and at East Mines, Colchester County. In New Brunswick an area was set out near Harvey Station in 1969. A provincial horticulturist will arrange a visit to these plantings.

SOURCE OF PLANTS

If you are interested in propagating plants from cuttings, ask your provincial horticulturist for further information.



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CONVERSION FACTORS FOR METRIC SYSTEM

Imperial units	Approximate conversion factor	Results in:
LINEAR		
inch	x 25	millimetre (mm)
foot	x 30	centimetre (cm)
yard	x 0.9	metre (m)
mile	x 1.6	kilometre (km)
AREA		
square inch	x 6.5	square centimetre (cm ²)
square foot	x 0.09	square metre (m ²)
acre	x 0.40	hectare (ha)
VOLUME		
cubic inch	x 16	cubic centimetre (cm ³)
cubic foot	x 28	cubic decimetre (dm ³)
cubic yard	x 0.8	cubic metre (m ³)
fluid ounce	x 28	millilitre (mℓ)
pint	x 0.57	litre (ℓ)
quart	x 1.1	litre (ℓ)
gallon	x 4.5	litre (ℓ)
bushel	x 0.36	hectolitre (hℓ)
WEIGHT		
ounce	x 28	gram (g)
pound	x 0.45	kilogram (kg)
short ton (2000 lb)	x 0.9	tonne (t)
TEMPERATURE		
degree fahrenheit	°F-32 x 0.56 (or °F-32 x 5/9)	degree Celsius (°C)
PRESSURE		
pounds per square inch	x 6.9	kilopascal (kPa)
POWER		
horsepower	x 746	watt (W)
	x 0.75	kilowatt (kW)
SPEED		
feet per second	x 0.30	metres per second (m/s)
miles per hour	x 1.6	kilometres per hour (km/h)
AGRICULTURE		
bushels per acre	x 0.90	hectolitres per hectare (hℓ/ha)
gallons per acre	x 11.23	litres per hectare (ℓ/ha)
quarts per acre	x 2.8	litres per hectare (ℓ/ha)
pints per acre	x 1.4	litres per hectare (ℓ/ha)
fluid ounces per acre	x 70	millilitres per hectare (mℓ/ha)
tons per acre	x 2.24	tonnes per hectare (t/ha)
pounds per acre	x 1.12	kilograms per hectare (kg/ha)
ounces per acre	x 70	grams per hectare (g/ha)
plants per acre	x 2.47	plants per hectare (plants/ha)

Examples: 2 miles x 1.6 = 3.2 km, 15 bu/ac x 0.90 = 13.5 hℓ/ha

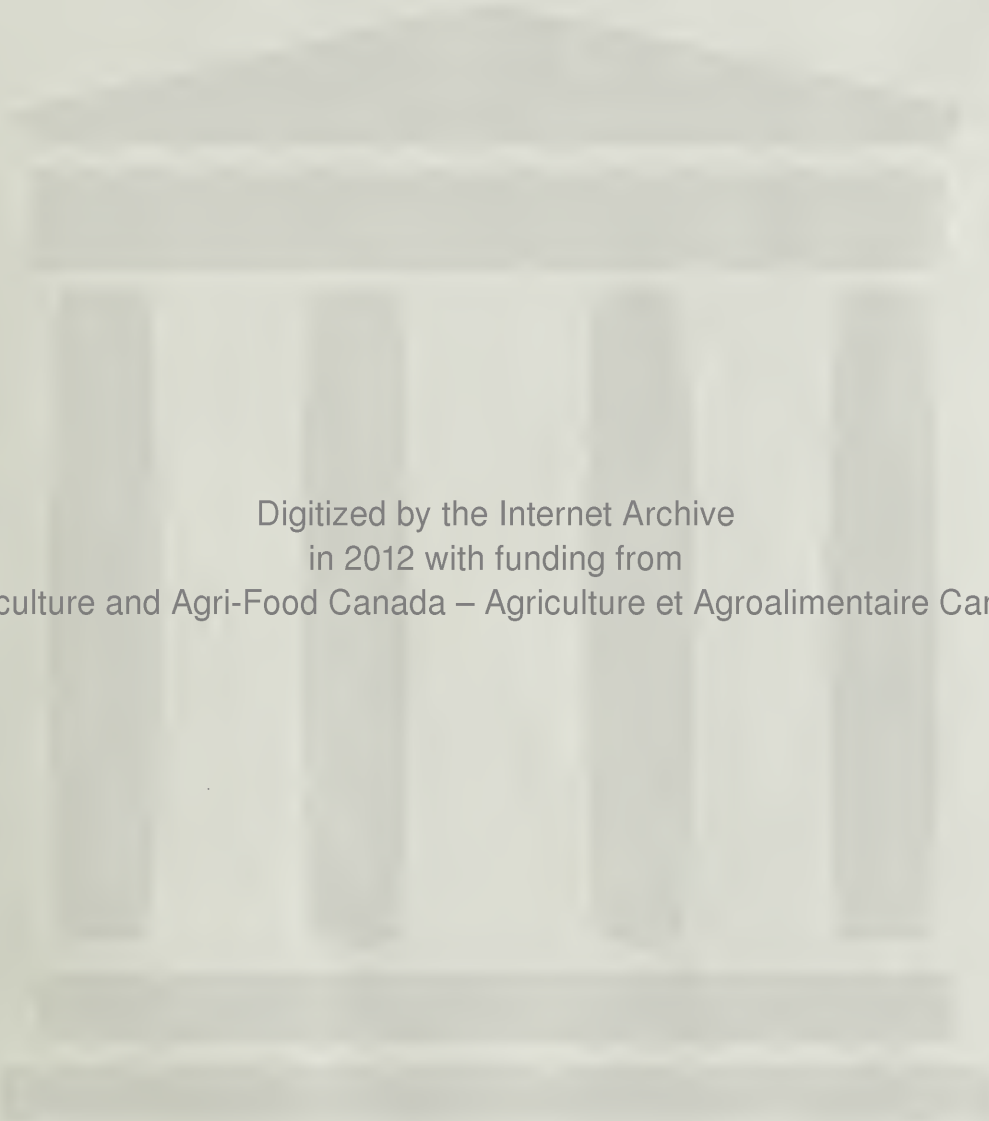
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